Accelerating Innovation with Open Platforms

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Presentation Overview

1. What is a “platform”? 

2. How open platforms contribute to innovation 

3. Platform support for an AAL Marketplace
1. What is a “platform”?
AAL Platform: Fiction or Feasible?
What does an open platform provide?

universAAL - UNIVERSal open platform and reference Specification for Ambient Assisted Living

Large-scale Integrated Project in EU 7th Framework Programme (Priority 7.1b: ICT & Aging)

Feb 2010 – Jan 2014
“Platform” – for whom?

Primary Users =
(Service/application developers)

End-Users
(Elderly, family members, care givers, …)
An Open Platform provides...

Run-time support
Run-time support

AAL Application

- Applications execute on standard platform
- Hides details of underlying operating systems
- Provides “adapters” for different types of devices

Common Platform/Adapter layer

User’s execution platform

(PC/MAC; sensors, actuators, other devices; network connections etc.)
An Open Platform provides...

- Run-time support
- Reference Architecture
Reference Model/Architecture

**Reference Model for AAL (RM)**

abstract framework for understanding significant relationships among the entities of some environment and description of important concepts.

**Reference Architecture for AAL (RA)**

models the abstract architectural elements (Building blocks) in the domain independent of technologies, protocols and products used to implement the domain.

**Concrete Architecture for AAL (CA)**

a basic set of concrete specifications in terms of APIs protocols, patterns, and models of higher-level shared data.
An Open Platform provides...

- Run-time support
- Reference Architecture
- Libraries of reusable components
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- Reference Architecture
- Libraries of reusable components
  - Tools to assist developers
An Open Platform provides...

- Run-time support
- Reference Architecture
- Libraries of reusable components
- Tools to assist developers
- Community Support
Makes no sense to live on “islands”

End-Users
(elderly, family, Informal carers, professional carers, funding authorities)

Explain what they really need
Be reassured that technology is “safe”
Develop an AAL platform

Industry/Service Providers

Provide services according to real needs
Develop reusable components

Researchers

Define research agenda matching real needs

Open Source Contributors

Need Single “Community”

OECD meeting, Tokyo, September 2012
The AALOA Manifesto

Version 0.12

AAL (Ambient Assisted Living) has great potential for positively influencing the lives of many people. But impact so far has been less than hoped, partly due to fragmentation of research efforts and the lack of a standardised approach for developers. To address this, we are forming the AALOA (AAL Open Association), and invite you to join in our efforts.

AAL - promising but problematic

The abbreviation "AAL" stands for Ambient Assisted Living and is about making smart use of technology to support wellbeing in the preferred living environment for people who might otherwise find this difficult (e.g. inform or very elderly people who want to continue remaining in their own homes). AAL also offers a promising approach with age-friendly urban design, which offers a way of developing sustainable住...
2. How open platforms contribute to innovation
Open Platforms & Innovation

Widespread adoption of open platforms for AAL will accelerate innovation, making it easier for:

• **Developers** to provide *customized* solutions

• **Users** to find, adopt and *benefit* from them
Why open platforms accelerate innovation (1)

A platform provides a kind of “standard”. And the lack of standards has been identified as one of the barriers to innovation.


Why open platforms accelerate innovation (2)

Open platforms foster communication and cooperation amongst developers and stakeholders. This helps overcome the barrier of “failures that hinder the flow of knowledge and technology and reduce the overall efficiency of ... R&D”

Why open platforms accelerate innovation (3)

• Open platforms remove the need to start from scratch for every development
• It becomes feasible to re-use components from earlier work, and to integrate with solutions developed by others
• This reduces costs and allows more rapid development
• Mitigates financing barrier to innovation
  (lower costs instead of more money....)
What is made possible by a platform?

Instead of each AAL service being built from scratch for specific needs – establish a single “standard” way to build AAL applications.

Make it easy for different vendors to create & sell different components that can be incorporated in multiple AAL services.
3. Platform support for an AAL Marketplace
The AAL Marketplace:
How do service providers & users meet?
Successful because it is easy for:

- Users to find applications
- Users to download, install and pay for apps
- Developers to sell through a single channel
Apple’s App Store concept

Proprietary platform
“App Store” for AAL?

Service Developers

Upload

“AAL Store”

Users

Browse, select & pay

Download

Some services may be Distributed over several nodes

Common Platform/Adapter layer

User’s execution platform
(PC/MAC; sensors, actuators, other devices; network connections etc.)
An Open Platform provides...

- Run-time support
- Reference Architecture
- Libraries of reusable components
- Tools to assist developers
- Community Support
- Marketplace Support
Conclusion:
We need to move platforms from fiction to reality...
... and make sure people agree to stand on the same platform!
Reserve Slides
Problems ... and possible solutions

User acceptance and/or uptake problems

- No place for users to advertise their needs
- Users could not find existing services
- Users skeptical
- Users needs not met

Technical / cost problems

- Too much one-off development, too little reuse
- Diversity of devices
- Inter-operability problems

Functioning AAL service marketplace

1. Fully representative AAL community

2. “Standard” AAL development platform

3. OECD meeting, Tokyo, September 2012
AAL/the self-serve society: not to be viewed in isolation

* Energy efficiency
* Home automation
* Social networking

ICT for health (eHealth)

OECD meeting, Tokyo, September 2012